

What is claimed is:

1. A deheading apparatus operating in conjunction with a petroleum coke-producing vessel having a body, an outlet, and a removable head at the outlet, the apparatus comprising:

5 a compound pivot joining the body and the head such that movement of the head between an open position and a closed position traces a non-circular path; and

a powered actuator which assists in moving the head in the non-circular path.

10 2. The apparatus of claim 1 wherein the path approximates a portion an ellipse having an eccentricity of at least 1.5.

15 3. The apparatus of claim 1 wherein the path approximates an ellipse having an eccentricity of at least 2.0.

4. The apparatus of claim 4 wherein the actuator comprises a telescoping arm having an end coupled to the head.

20 5. The apparatus of claim 4 wherein the actuator comprises a worm gear having an end coupled to the head.

6. The apparatus of claim 4 wherein the actuator comprises a plurality of cables coupled to the head.

7. A coking vessel comprising:
a body;
a head;
a trammel pivot coupling the body to a first section of the
5 head;

power means for actuating the pivot whereby the vessel is unheaded by moving the head laterally while simultaneously raising the first section of the head and lowering an opposite section of the head, and reheaded by moving the head laterally while simultaneously lowering the first section of the head and rasing an opposite section of the head.

8. The vessel of claim 7 wherein the means for actuating comprises a telescoping arm having an end coupled to the head.

9. The vessel of claim 7 wherein the means for actuating comprises a worm gear having an end coupled to the head.

10. The vessel of claim 7 wherein the means for actuating a
20 plurality of cables coupled to the head.

11. A coking vessel comprising:

a drum having an opening;
a head fitted to said opening;
25 a trammel pivot coupling the head to the drum;

a pair of hydraulic pistons affixed to opposite sides of the drum and to the head at first and second connection points, whereby the head pivots about a line drawn between the connection points while moving laterally.

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12. A method of operating a coking vessel having a body and a removable head, the method comprising:

coupling the body to a first section of the head with a pivot;

10 opening the vessel by moving the head laterally while simultaneously raising the first section of the head and lowering an opposite section of the head; and

15 closing the vessel by moving the head laterally while simultaneously lowering the first section of the head and raising the opposite section of the head.

20 13. The method of claim 12 wherein the opening and closing of the vessel are facilitated by at least two working pistons coupled to juxtaposing sides of the body and head.

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14. The method of claim 12 wherein the opening and closing of the vessel are facilitated by a working piston coupled to the head and to a fixture adjacent the vessel.

15. The method of claim 12 wherein the opening and closing of the vessel are facilitated by a first cable coupled to the first section of the head and a second cable coupled to the opposite section of the head.

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16. The method of claim 12 wherein the opening and closing of the vessel are facilitated by a worm gear coupled to the head.